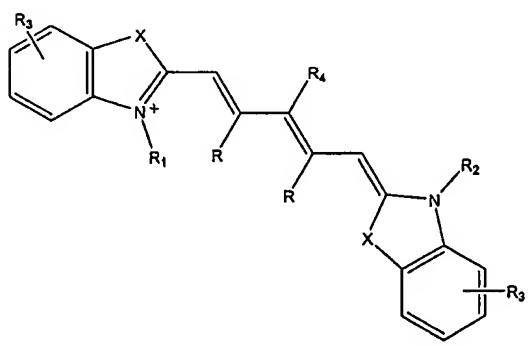
WE CLAIM:

1. An imaging agent comprising a serum albumin protein covalently conjugated to one or more infrared or near-infrared fluorescent substances.

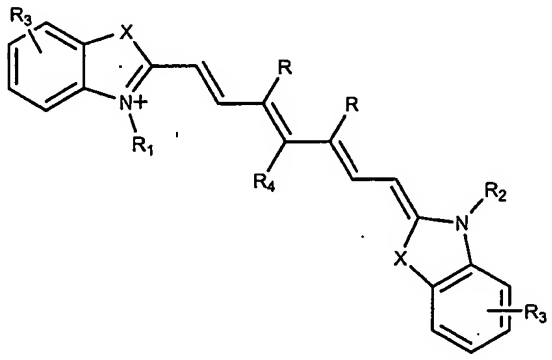
2. An imaging agent comprising serum albumin protein that is admixed with one or more infrared or near-infrared fluorescent substances.

3. An imaging agent of claim 2, wherein the one or more infrared or near-infrared fluorescent substances are admixed with the serum albumin, thereby forming a non-covalent complex.

4. The imaging agent according to claim 1 or 2, wherein the imaging agent comprises a fluorescent substance having a structure of formula (I) or formula (II):



(I)



(II)

wherein, as valence and stability permit,

X represents $C(R)_2$, S, Se, O, or NR_5;

R represents H or lower alkyl, or two occurrences of R, taken together, form a ring together with the carbon atoms through which they are connected;

R_1 and R_2 represent, independently, substituted or unsubstituted lower alkyl, lower alkenyl, cycloalkyl, cycloalkylalkyl, aryl, or aralkyl, e.g., optionally substituted by sulfate, phosphate, sulfonate, phosphonate, halogen, hydroxyl, amino, cyano, nitro, carboxylic acid, amide, etc., or a pharmaceutically acceptable salt thereof;

R_3 represents, independently for each occurrence, one or more substituents to the ring to which it is attached, such as a fused ring (e.g., a benzo ring), sulfate, phosphate, sulfonate, phosphonate, halogen, lower alkyl, hydroxyl, amino, cyano, nitro, carboxylic acid, amide, etc., or a pharmaceutically acceptable salt thereof;

R_4 represents H, halogen, or a substituted or unsubstituted ether or thioether of phenol or thiophenol; and

R_5 represents, independently for each occurrence, substituted or unsubstituted lower alkyl, cycloalkyl, cycloalkylalkyl, aryl, or aralkyl, e.g., optionally substituted by sulfate, phosphate, sulfonate, phosphonate, halogen, hydroxyl, amino, cyano, nitro, carboxylic acid, amide, etc., or a pharmaceutically acceptable salt thereof.

5. A pharmaceutical preparation comprising an imaging agent of claim 1 or 2 and a pharmaceutically acceptable excipient.

6. The imaging agent according to claim 1 or 2, wherein the imaging agent comprises a fluorescent substance selected from indocyanine green, IRDye78, IRDye80, IRDye38, IRDye40, IRDye41, IRDye700, IRDye800, IRDye800CW, Cy7, IR-786, DRAQ5NO, or an analog thereof.

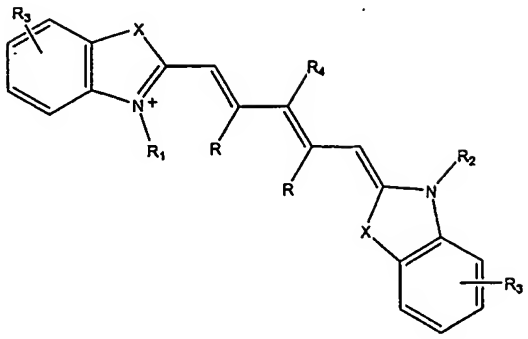
7. An imaging agent of claim 1 or 2, wherein said serum albumin protein is a human serum albumin protein.

8. An imaging agent of claim 1 or 2, wherein said serum albumin protein is colloidal serum albumin protein.

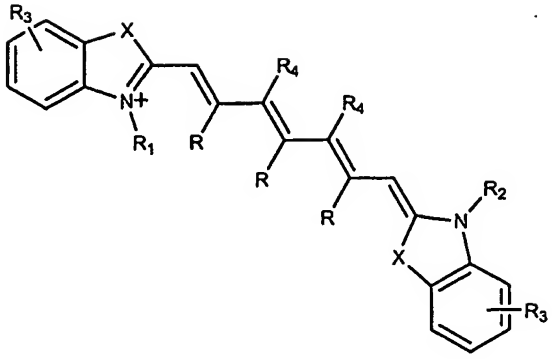
9. An imaging agent of claim 8, wherein the colloidal serum albumin protein is nanocolloidal serum albumin protein.

10. An imaging agent of claim 1 or 2, wherein the fluorescent substance is IRDye78, IRDye800CW, indocyanine green, or an analog thereof.

11. The imaging agent according to claim 1 or 2, wherein the imaging agent comprises a fluorescent substance having a structure of the formula (I) or formula (II):



(I)



(II)

wherein, as valence and stability permit,

X represents $C(R)_2$, S, Se, O, or NR_5;

R represents H or lower alkyl, or two occurrences of R, taken together, form a ring together with the carbon atoms through which they are connected;

R_1 and R_2 represent, independently, substituted or unsubstituted lower alkyl, lower alkenyl, cycloalkyl, cycloalkylalkyl, aryl, or aralkyl, e.g., optionally substituted by sulfate, phosphate, sulfonate, phosphonate, halogen, hydroxyl, amino, cyano, nitro, carboxylic acid, amide, etc., or a pharmaceutically acceptable salt thereof;

R_3 represents, independently for each occurrence, one or more substituents to the ring to which it is attached, such as a fused ring (e.g., a benzo ring), sulfate, phosphate, sulfonate, phosphonate, halogen, lower alkyl, hydroxyl, amino, cyano, nitro, carboxylic acid, amide, etc., or a pharmaceutically acceptable salt thereof;

R_4 represents H, halogen, or a substituted or unsubstituted ether or thioether of phenol or thiophenol; and

R_5 represents, independently for each occurrence, substituted or unsubstituted lower alkyl, cycloalkyl, cycloalkylalkyl, aryl, or aralkyl, e.g., optionally substituted by sulfate, phosphate, sulfonate, phosphonate, halogen, hydroxyl, amino, cyano, nitro, carboxylic acid, amide, etc., or a pharmaceutically acceptable salt thereof.

12. A pharmaceutical preparation comprising an imaging agent of claim 10 and a pharmaceutically acceptable excipient.

13. The imaging agent according to claim 11, wherein the imaging agent comprises a fluorescent substance selected from indocyanine green, IRDye78, IRDye80, IRDye38, IRDye40, IRDye41, IRDye700, IRDye800, IRDye800CW, Cy7, IR-786, DRAQ5NO, or an analog thereof.

14. An imaging agent of claim 11, wherein said serum albumin protein is a human serum albumin protein.

15. An imaging agent of claim 11, wherein said serum albumin protein is nanocolloidal serum albumin protein.

16. An imaging agent of claim 11, wherein the fluorescent substance is selected from IRDye78, IRDye800CW, indocyanine green or an analog thereof.

17. A method of imaging either the lymphatic or circulatory system of an animal or any portion thereof, comprising

(a) introducing an imaging agent of claim 1, 2, 14, or 15 into the animal;

(b) exposing the animal or portion thereof to light; and

(c) detecting an emission wavelength of the imaging agent.

18. A method for of imaging the lymphatic system of an animal or any portion thereof, comprising

(a) introducing a fluorophore into the animal;

(b) exposing the animal or portion thereof to light; and

(c) detecting an emission wavelength of the imaging agent.

19. A method of claim 17 or 18, wherein the fluorophore is selected from indocyanine green, IRDye78, IRDye80, IRDye38, IRDye40, IRDye41, IRDye700, IRDye800, IRDye800CW, Cy7, IR-786, DRAQ5NO, or an analog thereof.

20. The method of claim 17 or 18, wherein said light comprises an excitation wavelength of the fluorescent substance.

21. The method of claim 17 or 18, wherein detecting an emission wavelength includes generating an image from light detected in the near-infrared or infrared wavelength region.

22. The method of claim 17 or 18, comprising generating a color video image of an area surrounding the injection site and an image in the near-infrared or infrared wavelength region.

23. The method of claim 17 or 18, wherein detecting an emission wavelength includes imaging a site of the animal through the skin.

24. The method of claim 17 or 18, wherein detecting an emission wavelength includes imaging a site of the animal that is exposed by surgery or another medical procedure.

25. The method of claim 17 or 18, wherein detecting an emission wavelength includes imaging at least a portion of an eye of the animal.